DEC STD 012-7 UNIFIED NUMBERING CODE - 74 CLASS PART NUMBERING CONVENTIONS AND ASSIGNMENT PROCEDURES

DOCUMENT IDENTIFIER: A-DS-EL00012-07 Rev B1, 08-Aug-1989

ABSTRACT: This section of DEC STD 012 defines the requirements for the assignment and control of 74 class part identifiers.

APPLICABILITY: The requirements of this standard are mandatory for all Digital personnel responsible for assigning part identifiers to 74 class parts.

STATUS: APPROVED 04-Mar-1987; type $ VTX SMC for expiration date.

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REVISION HISTORY:	Rev A,	19-Feb-1981	
	Rev B,	04-Mar-1987	
	Rev B1,	08-Aug-1989	ECO # CTS01

Document Management Category:	Part and Document Identification (TSP)
Responsible Department:	Central Specification Control Systems
Responsible Person:	Jerry Lepire
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APPROVAL: This document has been recommended for approval by the General Review Group for its category. The B1 revision is an update with clerical changes only.

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1 INTRODUCTION

Historically, the definition of the 74 part class has been the source of some confusion. Originally, 74 class was intended to cover items either fabricated in-house or expected to be fabricated in-house in the near future. However a majority of 74 class parts have always been made outside Digital and, as such, require the formal vendor controls provided by the Purchased Part System. This standard integrates 74 class parts into portions of that system.

1.1 PURPOSE

The purpose of this standard is to define the 74 class part identifier assignment and control process.

1.2 SCOPE

This standard clarifies the definition of the 74 class part by listing the types of parts it covers and does not cover. The activities of groups responsible for assignment and control are described.

The definitions and procedures described in this standard apply to all of Digital Equipment Corporation.

NOTE

This standard applies to 74 class part numbers and variations assigned after 30-Jun-1980.

1.3 RESPONSIBILITIES

1.3.1 Part Number Requestors

Requestors of 74 class part identifiers are responsible for providing the information detailed under subhead 3.1.1, and for assisting the other responsible groups in performing the tasks described throughout this standard.

1.3.2 Engineering Services

The Engineering Services groups at each site are the focal point for obtaining new 74 class part identifiers from Central Specification Control Systems, as described under subhead 3.1.1

The Engineering Services groups are responsible for creating, storing, and controlling drawings for 74 class part identifiers as described in subhead 3.1.6.

They also update Document Control File (DOCS) entries, as document identifiers are assigned, released, and updated.

1.3.3 Central Specification Control Systems

Central Specification Control Systems (CSCS) is responsible for assigning new 74 class part identifiers, and serves as the focal point in the development of information, as described under subhead 3.1.2. The responsible individual is the 74 class coordinator Jerry Lepire, NRO5/M2, DTN: 234-5073, SKYHWK::LEPIRE.

1.3.4 Mechanical Manufacturing Engineering

Group Mechanical Manufacturing Engineering (MME) representatives, or their designates, are responsible for enabling the manufacture and inspection of new 74 class parts as described under subhead 3.1.3.

1.3.5 Engineering New Products Purchasing

Engineering New Products Purchasing (ENPP), or their designates, is responsible for resolving issues of procurement of the new 74 class parts, as described under subhead 3.1.4.

1.3.6 Engineering Services Document Control

Engineering Services Document Control is responsible for entering new 74 class document identifiers into the Document Control File (DOCS), as described under subhead 3.1.5.

2 DEFINITION AND DESCRIPTION OF 74 CLASS PART IDENTIFIERS

2.1 DEFINITION OF 74 CLASS PARTS

74 class part identifiers are assigned to molded, cast, or fabricated non-electrical parts that are either wholly designed by Digital or are reworked to Digital's specifications. They may be metal or non-metal. 74 class parts will typically need process or tooling development work to determine the optimum fabrication methods.

In addition, 74 part class covers only items not defined by any other existing part classes. Typical fabrication methods identified with 74 class items are:

Metal Fabrication	Non-Metal Fabrication
casting	casting
die casting	extrusion
plaster casting	machining
sand casting	molding
machining	blow molding
powder metal fabrication	reaction injection molding
sheet metal fabrication	rotational molding
stamping	rubber molding
wire forming	structural foam molding
vacuum forming	transfer molding

Certain non-electrical parts could be classified as part class 12 or part class 74, depending on the way they are made. To be consistent, the following types of parts will always be assigned 74 class part identifiers:

bases	gears
bezels	hinges
brackets	housings (excluding connectors)
chassis	panels
covers	pulleys
frames	shafts
foam filters	supports

The following types of parts will always be assigned 12 class part identifiers:

bearings	heatsinks (cataloged and special)
bushings	shock mounts and isolators
casters	springs (cataloged and special)
connector housings	
fan finger guards	

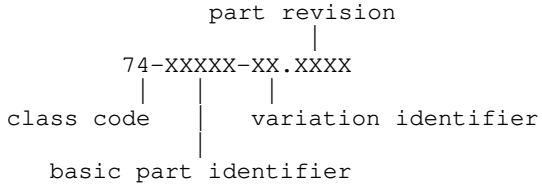
part class 74 does not cover the following types of fabricated parts, as defined in *DEC STD 012-2 Unified Numbering Code: for Part Identifier Class Codes*

Part class 14:	Printed circuit board material
Part class 34:	Tables and tabletops
Part class 36:	Labels
Part class 47:	Machine tools
Part class 48:	Raw fabricated materials

Mechanical Manufacturing Engineering and Component Engineering will continue to work together to resolve issues of part classification.

2.2 74 CLASS PART IDENTIFIERS

74 class part identifiers follow the standard Digital 2-5-2.4 format described in *DEC STD 012-0 Part Identification Standard:*



Basic part identifiers are sequential, non-significant numbers. The variation identifier is not encoded with a specific meaning and meets the requirements of *DEC STD 012-0*.

3 ASSIGNMENT PROCESS

3.1 DESCRIPTION OF PROCESS

The flow chart shown in Figure 1 maps out the sequence of events required to create a 74 class part identifier and the interaction among the responsible groups. The following subheads describe these events and associated responsibilities.

3.1.1 Part Number Requestor and Engineering Services

The requestor of a 74 class part number initiates the process by contacting his or her site Engineering Services group. Engineering Services provides Central Specification Control Systems (CSCS) with the following initial minimum information:

a. Requestor's name, location, cost center, and telephone number.
b. Description of part
c. "First used-on" product.
d. Project name and engineering discrete project number.

Information may be provided by telephone, in person, or by mailing in a Part Number Request Form (PNRF). Requestors are urged to initiate their part number requests as early in the design stage as possible.

NOTE

Variations to existing 74 class parts are new parts, and need to go through the entire part number assignment process described in subhead 3 of this standard.

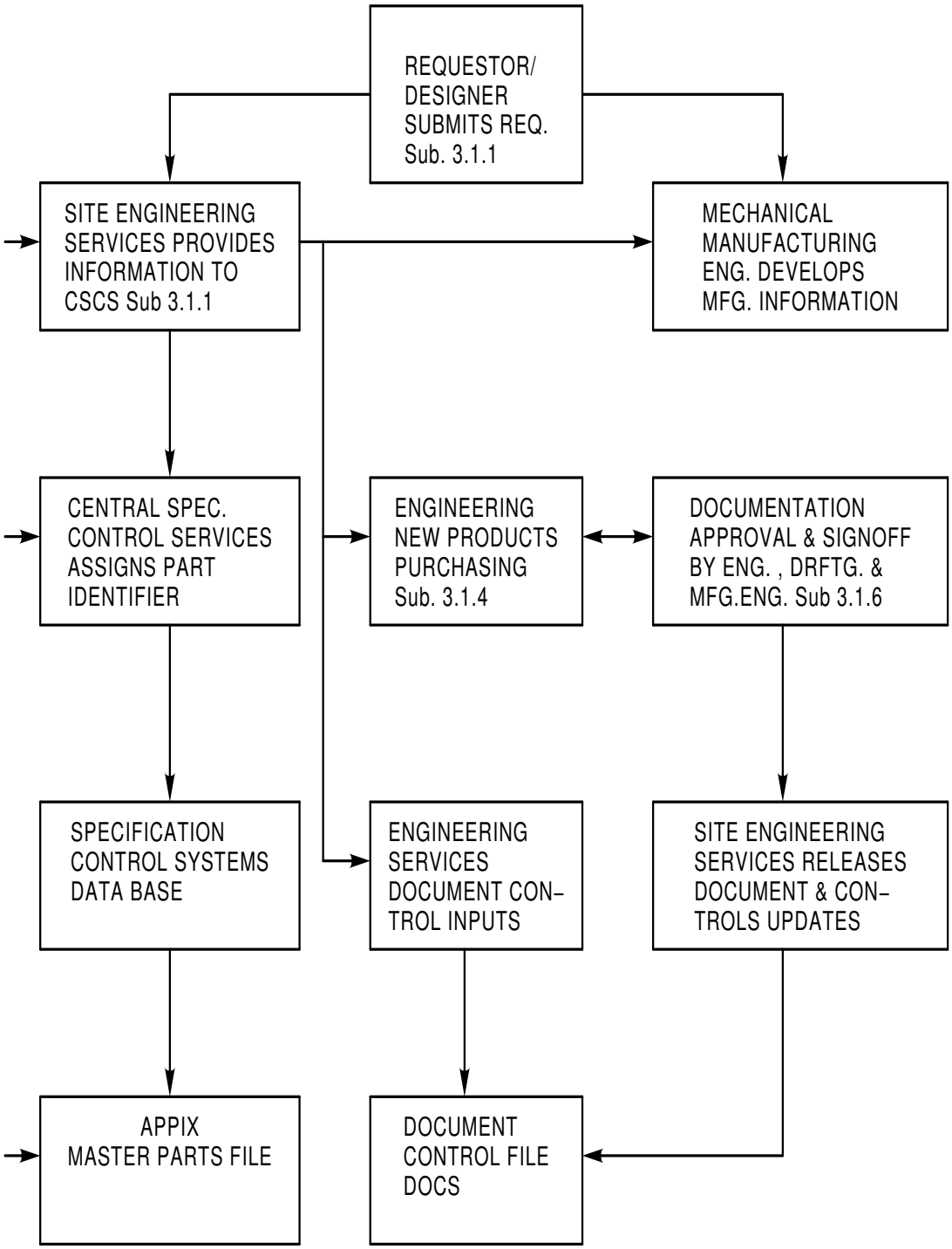
3.1.2 Central Specification Control Systems

Requests for 74 class part numbers go to the Central Specification Control Systems' 74 class coordinator by phone or otherwise, who immediately determines if the part meets the definition of 74 class and, if so, assigns a part identifier.

Central Specification Control Systems inputs the new 74 class part number into the Specification Control Data Base (SCDB) and the data is passed to the APPIX Master Parts File, via input tape. Part number information includes description, Functional Class Descriptor (FCD) codes, and Early Warning System (EWS) codes.

The Qualified Vendor List and the Buy Cards are created by CSCS. The data is maintained by the Component Engineering Manager designees.

Figure 1: Flowchart of Part and Document Identifier Assignment Procedure


REQUESTOR/ DESIGNER SUBMITS REQ. Sub. 3.1.1
SITE ENGINEERING SERVICES PROVIDES INFORMATION TO CSCS Sub 3.1.1
MECHANICAL MANUFACTURING ENG. DEVELOPS MFG. INFORMATION
CENTRAL SPEC. CONTROL SERVICES ASSIGNS PART IDENTIFIER
ENGINEERING NEW PRODUCTS PURCHASING Sub. 3.1.4
DOCUMENTATION APPROVAL & SIGNOFF BY ENG. , DRFTG. & MFG.ENG. Sub 3.1.6
SPECIFICATION CONTROL SYSTEMS DATA BASE
ENGINEERING SERVICES DOCUMENT CON- TROL INPUTS
SITE ENGINEERING SERVICES RELEASES DOCUMENT & CON- TROLS UPDATES
APPIX MASTER PARTS FILE
DOCUMENT CONTROL FILE DOCS

3.1.3 Mechanical Manufacturing Engineering (or Designate)

Mechanical Manufacturing Engineering, or their designate, reviews the drawings and other part information to ensure that new 74 class parts can be economically manufactured using the materials and processes proposed by the designer. Each new part is assigned to a manufacturing engineer who addresses the following tasks:

a. **Manufacturability:** Develop and define optimum manufacturing processes for fabrication of the new part. Select vendors in conjunction with ENPP (see subhead 3.1.4). Assist Engineering Services in creating clear, accurate drawings.

b. **Tooling:** Develop and document tooling requirements for expected volume and manufacturing lifespan of the new part.

c. **Materials Selection:** Ensure selection of raw materials that perform to functional specifications and are in accord with applicable regulatory requirements, such as UL flammability tests, etc.

d. **Quality Control:** Develop incoming inspection procedures and supporting instrumentation.

MME works closely with Engineering New Products Purchasing, especially on questions of vendor selection and support.

3.1.4 Engineering New Products Purchasing (or Designate)

Engineering New Products Purchasing (ENPP) works with issues relating to the purchase of the new 74 class parts. New parts are assigned to purchasing specialists. The purchasing specialist, in concert with MME, identifies and establishes sources for the Qualified Vendor List.

These groups perform a joint evaluation of the vendors' business solvency, price, capacity, process capability and quality control methods. ENPP also helps set standard costs by soliciting quotes from potential vendors.

ENPP identifies which product groups and manufacturing facilities are impacted by the new part, and works with product group managers, plant managers, and plant purchasing managers to assure a smooth introduction of the part.

The double-ended arrow in Figure 1 indicates that ENPP's activities are highly interactive with those of Mechanical Manufacturing Engineering. Purchasing specialists work closely with the manufacturing engineers in MME.

3.1.5 Engineering Services Document Control

Engineering Services Document Control inputs the new 74 class document identifiers into the Document Control File (DOCS).

3.1.6 Release Procedure for 74 Class Part Number Documentation

74 class drawings are approved when the draftsperson, design engineer and the manufacturing engineer have signed the title block.

Documentation is submitted to the site Engineering Services groups for acceptance and release, in accordance with *DEC STD 182-0 Engineering Documentation Acceptance Criteria.* Once the documentation has been accepted, it is forwarded to Micrographics for filming and distribution, as described in *DEC STD 033-0 Microfilm Aperture Cards-Creation and Distribution Process.* Upon completion, the documentation is returned to the Engineering Services design library for storage and maintenance.

3.1.7 Engineering Services

Coordination of Engineering Change Orders for 74 class are the responsibility of the site Engineering Services groups and of the Manufacturing groups affected by the change. All changes must be approved and documented in accordance with the requirements of *DEC STD 100-1 Engineering Change Orders-Hardware.*

Engineering Services are also required to update Document Control File entries, as information becomes available.

APPENDIX A

REFERENCED DOCUMENTS

A.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00012-00	*DEC STD 012-0 Part Identification Standard*
EL-00012-02	*DEC STD 012-2 Unified Numbering Code: for Part Identifier Class Codes*
EL-00033-00	*DEC STD 033-0 Microfilm Aperture Cards - Creation and Distribution*
EL-00100-01	*DEC STD 100-1 Engineering Change Orders - Hardware*
EL-00182-00	*DEC STD 182-0 Engineering Documentation Acceptance Criteria*

Copies of Digital EL-Class documents may be obtained from Standards and Methods Control, NRO4/D4, DTN: 287-3724, JOKUR::SMC, or via VTX SMC.

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